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## ABSTRACT

This brief suggests that during the past 2 decades, the skills needed to succeed in the workplace have changed significantly. Technical skills remain important, but, increasingly, employers recognize another category of skills crucial to a worker's ability to work "smarter, not harder." These "soft," "core," "nontechnical," "essential," "generic," and "new basic" skills are required for organizations to adopt new forms of organization and management in which workers operate in teams with greater autonomy and accountability. A number of factors have converged to bring about the development of this set of employability competencies, including workplaces that place an emphasis on high performance jobs that require high skills and employer dissatisfaction with job applicants because of their competencies in areas other than technical skills. Current and future employers mention these skills most frequently as being essential: knowing how to learn; competence in reading, writing, and computation; effective listening and oral communication skills; adaptability through creative thinking and problem solving; personal management with strong self-esteem and initiative; interpersonal skills; ability to work in teams or groups; leadership effectiveness; and basic technology skills. (Contains 16 annotations of resources that can help practitioners provide a new focus to their education and training efforts.) (YLB)

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Work Force Education:  
Beyond Technical Skills  
Trends and Issues Alert No. 1

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## Work Force Education: Beyond Technical Skills

During the past 2 decades, the skills needed to succeed in the workplace have changed significantly (Murnane and Levy 1996). Technical skills remain important, but, increasingly, employers recognize that it is another category of skills that are crucial to a worker's ability to work "smarter, not harder." These skills go by a number of labels including "soft skills," "core skills," "nontechnical skills," "essential skills," "generic skills" and "new basics" (Alpern 1997; Murnane and Levy 1996). These skills are required for organizations to adopt new forms of organization and management in which workers operate in teams with greater autonomy and accountability (*21st Century Skills for 21st Century Jobs* 1999). This *Alert* reviews some of the trends in the development of these skills and provides an annotated list of resources to help practitioners provide a new focus to their education and training efforts.

A number of factors have converged to bring about the development of this set of employability competencies. In 1959, jobs were classified as 20% professional, 20% skilled, and 60% unskilled; by 1997, however, the percentages for skilled and unskilled had reversed, with 60% of the jobs classified as skilled and only 20% as unskilled (*21st Century Skills for 21st Century Jobs* 1999). This reversal is reflected in the demands of many workplaces that now place an emphasis on high performance jobs that require high skills (Murnane and Levy 1996). Many employers have been unable to find the kind of employees they need; however, when they express dissatisfaction with job applicants, it is not on the basis of their technical skills but rather because of their competencies in other areas (Alpern 1997; Murnane and Levy 1996). The trend of the changing workplace coupled with employer dissatisfaction with job applicants led to efforts to define essential skills needed by current and future employees. The following skills are mentioned most frequently: knowing how to learn; competence in reading, writing, and computation; effective listening and oral communication skills; adaptability through creative thinking and problem solving; personal management with strong self-esteem and initiative; interpersonal skills; the ability to work in teams or groups; leadership effectiveness; and basic technology skills (Clagett 1997; McNabb 1997; Murnane and Levy 1996; Oliver et al. 1997). These skills, once reserved for those in management, are now considered necessary for individuals at all levels of employment (Clagett 1997).

A number of publications have appeared that address one or more of these skills. Several of these provide assistance to educators and trainers wishing to work with learners in skill development. For example, Holmes and Clizbe (1997) describe activities that help students develop the skills of communication, interpersonal, problem solving, and critical thinking. Roth (1996) discusses how the skill of learning to learn can be facilitated. The skill of teamwork is addressed by Hellinghausen and Myers (1998) and Cannon-Bowers and Salas (1997). Others (e.g., Greenan, Humphreys, and McIlveen 1997; Nabl and Bagley 1998) provide students' perspectives about these skills. Information on these and other resources can be found in the list that follows.

### Resources

Alpern, M. "Critical Workplace Competencies: Essential? Generic? Core? Employability? Non-Technical? What's in a Name." *Canadian Vocational Journal* 32, no. 4 (Autumn 1997): 6-16.

Suggests that employer satisfaction with employability competencies that high school and college graduates bring to the workplace is

often confused with what are called "soft skills." Attempts to clarify the semantic confusion regarding workplace competencies and provides lists of recent "essential skills."

Cannon-Bowers, J. A., and Salas, E. "Teamwork Competencies: The Interaction of Team Member Knowledge, Skills, and Attitudes." In *Workforce Readiness: Competencies and Assessment*, edited by H. F. O'Neil, Jr. Mahwah, NJ: Lawrence Erlbaum, 1997.

The ability to work as a team member is a frequently cited work force readiness skill. This chapter reviews recent work related to team competencies and then focuses on a subset of those competencies that are shared or compatible among team members. A series of propositions for teamwork and directions for research conclude the chapter.

Clagett, C. A. *Workforce Skills Needed by Today's Employers. Market Analysis MA98-5*. Largo, MD: Prince George's Community College, Office of Institutional Research and Analysis, 1997. (ED 413 949)

Reports on the results of a review of recent research conducted to identify the most valued skills in the current work force.

Evers, F. T.; Rush, J. C.; and Berdrow, I. *The Bases of Competence: Skills for Lifelong Learning and Employability*. San Francisco: Jossey-Bass, 1998.

Explains what skills and competencies are needed to succeed in today's workplace and details how colleges and universities can strengthen the curriculum to cultivate these skills in their undergraduate students.

Garrison, D. R. "Self-Directed Learning: Toward a Comprehensive Model." *Adult Education Quarterly* 48, no. 1 (Fall 1997): 18-33.

Presents a comprehensive model of self-directed learning that integrates three dimensions: self-management (contextual control), self-monitoring (cognitive responsibility), and motivation.

Greenan, K.; Humphreys, P.; and McIlveen, H. "Developing Transferable Personal Skills: Part of the Graduate Toolkit." *Education + Training* 39, no. 2 (1997): 71-78.

A postgraduate management program used the work-based skills of group work, presentations, and self- and peer assessments. Student respondents indicated they developed transferable interpersonal skills. Although they appreciated the value of self-/peer assessment, they had difficulties implementing it.

Hellinghausen, M. A., and Myers, J. "Empowered Employees: A New Team Concept." *Industrial Management* 40, no. 5 (September-October 1998): 21-23.

Companies striving to remain competitive are initiating empowered employee teams. In order for teams to be successful, however, proper training, communication, and timing are crucial, as well as the support of corporate culture. Some companies found that empowering employees resulted in increased productivity, profitability, and customer and employee satisfaction.

Holmes, J., and Clizbe, E. "Facing the 21st Century." *Business Education Forum* 52, no. 1 (October 1997): 33-35.

Describes two activities for marketing classrooms that involve skills students will need in the workplace: communication, interpersonal, problem solving, and critical thinking.

McNabb, J. G. "Key Affective Behaviors of Students as Identified by a Select Group of Secondary School Teachers Using the SCANS Categories." *Journal of Industrial Teacher Education* 34, no. 4 (Summer 1997): 29-41.

Secondary teachers identified student behaviors for the five affective areas of the Secretary's Commission on Achieving Necessary Skills (SCANS) report: responsibility, self-esteem, sociability, self-management, and integrity/honesty. The list of behaviors could provide a foundation for secondary schools to use in implementing performance-based curricula based on SCANS categories.

Murnane, R. J., and Levy, F. *Teaching the New Basic Skills. Principles for Educating Children to Thrive in a Changing Economy*. New York: Free Press, 1996.

This book proposes restructuring the education system using the principles and practices employed by successful businesses during the past 15 years of rapid change. Six new basic skills are proposed: the ability to read at the ninth-grade level or higher; the ability to do math at the ninth-grade level or higher; the ability to solve semistructured problems where hypotheses must be tested; the ability to work in groups with persons of different backgrounds; the ability to communicate effectively, both orally and in writing; and the ability to use computers to carry out simple tasks such as word processing.

Nabl, G. R., and Bagley, D. "Graduates' Perceptions of Transferable Personal Skills and Future Career Preparation in the UK." *Career Development International* 3, no. 1 (1998): 31-39.

Responses from 45 percent of graduates of a British university showed that they rated the importance of transferable skills more highly than their own ability in those skills; they tended to rate their level of ability lowest in information technology skills and highest in their ability to work without supervision; and that there are possible differences between the views of males and females.

Oliver, K. M.; Russell, C.; Gilli, L. M.; Hughes, R. A.; Schuder, T.; Brown, J. L.; and Towers, W. "Skills for Workplace Success in Maryland: Beyond Workplace Readiness." In *Workforce Readiness: Competencies and Assessment*, edited by H. F. O'Neill, Jr. Mahwah, NJ: Lawrence Erlbaum, 1997.

Explores some of the features of the state of Maryland's "Skills for Success" (SFS), a set of cross-disciplinary skills deemed essential for today's workplace. Generic in nature, SFSs have been developed around the following five categories: learning, thinking, communication, technology, and interpersonal skills. The collaborative process used to develop SFS is included in the chapter and they are compared to other nationally recognized workplace readiness skills.

Roth, G. L. "Learning to Learn: Western Perspectives." In *Constitutive Interplay Midst Discourse of East and West: Modernity & Postmodernity Renderings in Adult & Continuing Education. Proceedings of the International Adult & Continuing Education Conference*, edited by P. Cunningham et al. Seoul, Korea: Chung-Ang University, May 1996. (ED 401 408)

Building awareness of self as learner is central to learning. Active learners are more likely to experiment with new learning strategies and take risks. Learning to learn entails recognizing the causes and effects of peak learning, as well as developing coping strategies for mental blocks, blindspots, and other barriers. Facilitating learning to learn includes helping people become aware of their habits as learners. Supportive learning environments should contain structured activities that provide insight about the processes of learning to both the learner and the facilitator.

Shaw, J. B. and Fisher, C. D. "Practical Organizational Behavior Education (PROBE): Modifications and Innovations." *Journal of Management Education* 23, no. 1 (February 1999): 13-30.

Describes an approach used at Bond University in Australia to teach the interpersonal and organizational skills (e.g., organizational conflict, leadership, group dynamics) needed for success in business.

Smith, C. "What Do Employers Want? How Can a Portfolio Help?" *Career Planning and Adult Development Journal* 12, no. 4 (Winter 1996-1997): 47-53.

A career portfolio is organized evidence of work readiness and specific job skills and can be focused to show the skills that employers want. It can also make the case that one is prepared for the next stage of a career.

*21st Century Skills for 21st Century Jobs*. Washington, DC: U.S. Department of Commerce, U.S. Department of Education, U.S. Department of Labor, National Institute of Literacy, and the Small Business Administration, January 1999. <<http://www.vpskillssummit.org>>

In the workplace of the 21st century, workers will need to be better educated to fill new jobs and more flexible to respond to the changing knowledge and skill requirements of existing jobs. Workplaces will need to adopt organizational work systems that allow worker teams to operate with greater autonomy and accountability. Strategies for meeting the new demands are outlined and examples of promising partnerships and programs from throughout the United States are highlighted.

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